

WHAT IS CLAIMED IS:

1. A television (TV) receiving module which is connected to a display apparatus and adapted to receive TV broadcasts,  
5 comprising:

connector means for receiving power and a control signal from said display apparatus and providing a TV signal thereto;

a memory for storing a control firmware and data necessary for control and operation;

10 a microprocessor for receiving said power through said connector means, said microprocessor being operated according to said control firmware stored in said memory to receive said control signal through said connector means, provide a TV broadcast selection signal in response to the received control  
15 signal, perform a desired signal processing with respect to an input TV signal and provide the resulting TV signal to said display apparatus via said connector means;

tuner means for receiving said power through said connector means, selecting a TV signal of a desired broadcast  
20 from among TV signals inputted from a TV broadcast receiving antenna or cable in response to said TV broadcast selection signal from said microprocessor and providing the selected TV signal as said input TV signal to said microprocessor; and

an audio processor for processing an audio signal of  
25 said TV signal from said microprocessor.

2. The TV receiving module as set forth in claim 1,  
wherein said TV broadcast selection signal from said  
microprocessor includes:

an analog broadcast/digital broadcast selection signal  
5 for selection of an analog TV broadcast or a digital TV  
broadcast; and

a TV channel selection signal for selection of a channel  
in the selected analog TV broadcast or digital TV broadcast.

10 3. The TV receiving module as set forth in claim 2,  
wherein said tuner means includes:

a tuner for selecting a TV broadcast channel in response  
to said channel selection signal of said TV broadcast  
selection signal from said microprocessor;

15 an analog demodulator responsive to said analog  
broadcast/digital broadcast selection signal of said TV  
broadcast selection signal for demodulating an analog TV  
broadcast signal selected by said tuner and providing the  
resulting audio and video signals through said connector  
20 means; and

a digital demodulator responsive to said analog  
broadcast/digital broadcast selection signal of said TV  
broadcast selection signal for demodulating a digital TV  
broadcast signal selected by said tuner and providing the  
25 resulting MPEG (Moving Picture Experts Group) signal to said

microprocessor.

4. The TV receiving module as set forth in claim 1, wherein said connector means includes:

5       a power terminal for receiving said power from said display apparatus;

      a transmission terminal for outputting TV reception information from said microprocessor;

      a reception terminal for receiving said control signal  
10     from said display apparatus;

      an A/V terminal for outputting an analog A/V signal from said tuner means;

      a video signal terminal for outputting a video signal from said microprocessor; and

15     an audio signal terminal for outputting an audio signal from said audio processor.

5. The TV receiving module as set forth in claim 4, wherein said power terminal, transmission terminal, reception  
20     terminal, A/V terminal, video signal terminal and audio signal terminal of said connector means are implemented with pins, respectively.

6. A display apparatus which is connected to a TV  
25     receiving module and adapted to output video and audio signals

of a TV broadcast, comprising:

a power supply for supplying internal power to said display apparatus and external power to said TV receiving module, respectively;

5 connector means for providing said external power from said power supply and a control signal to said TV receiving module and receiving a TV signal from said TV receiving module;

a key input unit including a plurality of keys necessary  
10 for a TV receiving operation, said keys including a TV channel selection key and a volume adjustment key;

a controller for generating a control signal corresponding to a key signal inputted through said key input unit, providing the generated control signal to said TV  
15 receiving module through said connector means to control said TV receiving operation in response to the key signal, and receiving said TV signal from said TV receiving module through said connector means;

a signal processor for processing a video signal of said  
20 TV signal from said connector means to be displayable on a screen and adjusting a level of an audio signal of said TV signal;

a display unit for outputting a video signal from said signal processor to said screen; and

25 a speaker for outputting an audio signal from said

signal processor.

7. The display apparatus as set forth in claim 6,  
wherein said power supply is adapted to supply a plurality of  
5 different voltages to said TV receiving module.

8. The display apparatus as set forth in claim 6,  
wherein said connector means includes:

a power terminal for supplying said external power from  
10 said power supply to said TV receiving module;

a reception terminal for receiving TV reception  
information from said TV receiving module;

a transmission terminal for transmitting said control  
signal from said controller to said TV receiving module;

15 an A/V terminal for receiving an analog A/V signal from  
said TV receiving module;

a video signal terminal for receiving a video signal  
from said TV receiving module; and

an audio signal terminal for receiving an audio signal  
20 from said TV receiving module.

9. The display apparatus as set forth in claim 8,  
wherein said power terminal, transmission terminal, reception  
terminal, A/V terminal, video signal terminal and audio signal  
25 terminal of said connector means are implemented with pins,

respectively.

10. The display apparatus as set forth in claim 8,  
wherein said display apparatus is a TV receiver for receiving  
5 analog TV broadcasts.

11. The display apparatus as set forth in claim 8,  
wherein said display apparatus is a plasma display panel (PDP)  
TV receiver.

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12. A display apparatus for a computer which is  
connected to a TV receiving module, comprising:

a power supply for supplying internal power to said  
display apparatus and external power to said TV receiving  
15 module, respectively;

connector means for providing said external power from  
said power supply and a control signal to said TV receiving  
module and receiving a TV signal from said TV receiving  
module;

20 a key input unit including a plurality of keys necessary  
for a TV receiving operation and monitor operation, said keys  
including a TV/monitor mode selection key, a TV channel  
selection key and a volume adjustment key;

a controller for generating a control signal  
25 corresponding to a key signal inputted through said key input

unit, providing the generated control signal to said TV receiving module through said connector means to control said TV receiving operation or monitor operation in response to the key signal, and receiving said TV signal from said TV receiving module through said connector means;

a signal processor for processing a video signal of said TV signal from said connector means to be displayable on a screen and adjusting a level of an audio signal of said TV signal;

a display unit for outputting a video signal from said signal processor to said screen; and

a speaker for outputting an audio signal from said signal processor.

13. The display apparatus as set forth in claim 12, wherein said power supply is adapted to supply a plurality of different voltages to said TV receiving module.

14. The display apparatus as set forth in claim 12, wherein said connector means includes:

a power terminal for supplying said external power from said power supply to said TV receiving module;

a reception terminal for receiving TV reception information from said TV receiving module;

a transmission terminal for transmitting said control

signal from said controller to said TV receiving module;

an A/V terminal for receiving an analog A/V signal from  
said TV receiving module;

a video signal terminal for receiving a video signal  
5 from said TV receiving module; and

an audio signal terminal for receiving an audio signal  
from said TV receiving module.

15. The display apparatus as set forth in claim 12,  
10 wherein said display apparatus is a liquid crystal display  
(LCD) monitor.

16. A TV receiving system comprising:

a TV receiving module for selecting and receiving a TV  
15 signal of a desired broadcast from among TV signals inputted  
from a TV broadcast receiving antenna or cable and providing  
the received TV signal;

detachable connector means including a first connector  
installed in said TV receiving module for receiving external  
20 power and an external control signal and providing the TV  
signal received by said TV receiving module externally, and a  
second connector detachably coupled with said first connector;  
and

a display apparatus connected to said TV receiving  
25 module via said second connector of said detachable connector



means for providing said external power and external control signal to said TV receiving module, receiving said TV signal from said TV receiving module and outputting video and audio signals of the received TV signal.

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17. The TV receiving system as set forth in claim 16, wherein said TV receiving module includes:

a memory for storing a control firmware and data necessary for control and operation;

10 a microprocessor for receiving said external power through said detachable connector means, said microprocessor being operated according to said control firmware stored in said memory to receive said external control signal through said detachable connector means, provide a TV broadcast  
15 selection signal in response to the received control signal, perform a desired signal processing with respect to an input TV signal and provide the resulting TV signal to said display apparatus via said detachable connector means;

tuner means for receiving said external power through  
20 said detachable connector means, selecting a TV signal of a desired broadcast from among the TV signals inputted from said TV broadcast receiving antenna or cable in response to said TV broadcast selection signal from said microprocessor and providing the selected TV signal as said input TV signal to  
25 said microprocessor; and

an audio processor for processing an audio signal of said TV signal from said microprocessor.

18. The TV receiving system as set forth in claim 17,  
5 wherein said TV broadcast selection signal from said microprocessor includes:

an analog broadcast/digital broadcast selection signal for selection of an analog TV broadcast or a digital TV broadcast; and

10 a TV channel selection signal for selection of a channel in the selected analog TV broadcast or digital TV broadcast.

19. The TV receiving system as set forth in claim 18, wherein said tuner means includes:

15 a tuner for selecting a TV broadcast channel in response to said channel selection signal of said TV broadcast selection signal from said microprocessor;

an analog demodulator responsive to said analog broadcast/digital broadcast selection signal of said TV  
20 broadcast selection signal for demodulating an analog TV broadcast signal selected by said tuner and providing the resulting audio and video signals through said first connector; and

a digital demodulator responsive to said analog  
25 broadcast/digital broadcast selection signal of said TV

broadcast selection signal for demodulating a digital TV broadcast signal selected by said tuner and providing the resulting MPEG signal to said microprocessor.

5           20. The TV receiving system as set forth in claim 17, wherein said first connector includes:

          a power terminal for receiving said external power from said display apparatus;

          a transmission terminal for outputting TV reception  
10 information from said microprocessor;

          a reception terminal for receiving said external control signal from said display apparatus;

          an A/V terminal for outputting an analog A/V signal from said tuner means;

15           a video signal terminal for outputting a video signal from said microprocessor; and

          an audio signal terminal for outputting an audio signal from said audio processor.

20           21. The TV receiving system as set forth in claim 20, wherein said power terminal, transmission terminal, reception terminal, A/V terminal, video signal terminal and audio signal terminal of said first connector are implemented with pins, respectively.

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22. The TV receiving system as set forth in claim 16,  
wherein said display apparatus includes:

a power supply for supplying internal power to said  
display apparatus and said external power to said TV receiving  
5 module, respectively;

a key input unit including a plurality of keys necessary  
for a TV receiving operation, said keys including a TV channel  
selection key and a volume adjustment key;

a controller for generating a control signal  
10 corresponding to a key signal inputted through said key input  
unit, providing the generated control signal to said TV  
receiving module through said second connector to control said  
TV receiving operation in response to the key signal, and  
receiving said TV signal from said TV receiving module through  
15 said second connector;

a signal processor for processing a video signal of said  
TV signal from said detachable connector means to be  
displayable on a screen and adjusting a level of an audio  
signal of said TV signal;

20 a display unit for outputting a video signal from said  
signal processor to said screen; and

a speaker for outputting an audio signal from said  
signal processor.

25 23. The TV receiving system as set forth in claim 22,

wherein said power supply is adapted to supply a plurality of different voltages to said TV receiving module.

24. The TV receiving system as set forth in claim 22,  
5 wherein said second connector includes:

a power terminal for supplying said external power from said power supply to said TV receiving module;

a reception terminal for receiving TV reception information from said TV receiving module;

10 a transmission terminal for transmitting said control signal from said controller to said TV receiving module;

an A/V terminal for receiving an analog A/V signal from said TV receiving module;

15 a video signal terminal for receiving a video signal from said TV receiving module; and

an audio signal terminal for receiving an audio signal from said TV receiving module.

25. The TV receiving system as set forth in claim 24,  
20 wherein said power terminal, transmission terminal, reception terminal, A/V terminal, video signal terminal and audio signal terminal of said second connector are implemented with pins, respectively.

25 26. The TV receiving system as set forth in claim 16,

wherein said display apparatus is a TV receiver for receiving analog TV broadcasts.

27. The TV receiving system as set forth in claim 16,  
5 wherein said display apparatus is a PDP TV receiver.

28. The TV receiving system as set forth in claim 16,  
wherein said display apparatus is a computer monitor.

10 29. The TV receiving system as set forth in claim 28,  
wherein said computer monitor is an LCD monitor.